STATE AID TO CAR COMPANIES: WERE GOVERNMENT RESPONSES TO THE AUTO INDUSTRY CRISIS DIFFERENT IN THE UNITED STATES AND EUROPE?

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ABSTRACT

CHARLES KINGSLEY COATES-CHANEY: State Aid to Car Companies: Were Government Responses to the Auto Industry Crisis Different in the United States and Europe?
(Under the direction of Gary Marks)

The global recession in 2008 and 2009 hit car companies particularly hard. The effects were felt on both sides of the Atlantic. In this time of crisis, governments responded with many support programs to private finance and industry that had to work within WTO and EU competition rules. In the United States, General Motors and Chrysler received billions in guaranteed loans, car scrappage programs, and bankruptcy benefits. In Europe, the French government granted billions of euros in loans to its national champions PSA and Renault, as well as providing a car scrappage program and aid to individual factories. The German government focused its aid on a car scrappage program and aid to targeted factories. In the end, the different regulatory environments had less impact on making different state aid programs than did the differences in their domestic industry profiles.

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CHAPTER 1

INTRODUCTION

The auto industry crisis in 2008 and 2009 hit Europe and the USA with extreme intensity. US sales fell to their lowest levels per capita since the 1940s, and Germany's sales are still declining for the sixth consecutive year (McVeigh, 2013). With such extreme reductions in such a huge industry, government had to respond. The question was: How to save the car makers? In the United States the Bush and Obama administrations created a multitude of programs to provide state aid to the auto industry. It started by providing tens of billions of dollars in subsidized loans to General Motors and Chrysler. In France, Sarkozy's government provided the same, as well as calls for a Europe-wide concerted auto bailout plan with Germany. Ultimately, Germany made no large state loans, and France was left to herself to provide six billion euros of supported loans to her domestic companies Peugeot-Citroën and Renault.

Both regions adopted car scrappage programs. All of these programs were related to improving the tailpipe emissions and fuel-efficiency of each country's vehicle fleets. Governments also provided smaller-scale bailouts to help individual factories become more competitive and more environmentally friendly. In the US, the government also supported companies through tax carryforwards for “New GM.” In France, the government is providing up to an additional six billion euros in loans to Banque PSA Finance.

The efforts by governments to help manufacturers seem somewhat curious, did not all

countries provide the same amounts of aid? Why have car scrappage programs instead of support for developing better cars? Why bother supporting individual factories to modernize, as opposed to merely supporting the parent company so they would have funds to spend as they saw fit? These inconsistencies can be answered when put into the context of the regulatory constraints of the two regions. In the US, the government must still comply with WTO rules or face real consequences. In Europe, the EU has control over business relations between countries in the common market in addition to WTO rules. The limitations of governments under these international regulatory constraints caused them to adopt the bailout plans that they did.

CHAPTER 2

BASES

The countries which have the largest amount of car manufacturing are not necessarily the most influential in all aspects of the world car market. The United States is a clear choice to compare the regulatory constraints to providing state assistance to the auto makers. The US car market is more than 14.5 million cars-sold strong in 2012 (Henry, 2012). Further, domestic producers of cars in the US still have a very strong share of the market. When considering light trucks, the American companies produce the lion's share of the personal vehicle market. Against this American market we have the somewhat-federal system of the European Union. The EU is composed of several countries, many of which have their own domestic car makers. The domestic car markets of individual countries vary from Sweden's niche makers Volvo and Koenigsegg, to Germany's giant VW Group and Daimler AG. These domestic producers can be viewed as national champions of sorts, representing the strength and ingenuity of a country's engineers and craftsmen. In the past, when countries had hundreds of individual manufacturers, it might not be possible to talk about one national company, but consolidation kept the best alive. By the 21st century, countries like England (Land Rover, Rolls Royce, Vauxhall), Sweden (Volvo and SAAB), and Spain (SEAT) had their domestic producers consumed by foreign multinationals. Only in France, Germany, and Italy did the car makers survive to consume other countries' brands. When considering aid to the auto industry across the Atlantic, the case of Italy becomes problematic because of FIAT's

ownership of Chrysler, a company that was bailed-out by the US government, not to mention the secretive nature of a clientalistic system such as Italy's. That leaves Germany – auto producer and exporter to the world, and France – with domestic companies formerly under state control, and before the crisis, losing ability to attract buyers in foreign markets.

So, what was the situation like in these three countries that lead to the need for government bailouts? In the United States, the domestic car producers were still on top, but had been facing a gradual decline only exacerbated by the crisis in 2008. The US car market had no real competition to speak of from foreign car makers up to the 1950s. Even then, though, it was not until after the first and second oil crises that the fuel efficiency of foreign brands began to be a true marketing advantage. The US car market began to shift. US car makers began to focus on light trucks (not just pickups, but minivans and SUVs) with the rise of foreign brands. Light trucks sales offered several advantages for the big three: higher profit margins, lower (or absent) safety and fuel-efficiency requirements, lack of foreign competition and the infamous chicken tax. All of this lead to a situation where the big three began to rely more heavily on light truck sales, so much so that the overall landscape of the US passenger-vehicle fleet was changed, increasing in light trucks from one-third to one-half up to the year 2000 (Klier cited in Klier and Rubenstein, 2012). After that, increases in the market share of light trucks leveled off.

The recession of 2008 hit the US auto industry particularly hard. Sales slipped from 16.2 million in 2007 down to 10.1 million in 2009. Declining sales combined with rising unemployment, increased gas prices, and lack of available credit amplified the crisis for car makers. Rising unemployment meant that fewer people had money to buy new cars –

including laid-off auto industry workers. Those who still had jobs, however had difficulty obtaining credit – both the internal financing institutions of the car companies and independent banks were not able to provide as many car loans. Gasoline prices rising so rapidly in 2008 further stretched consumer's budgets, making them less likely to buy new cars, especially light trucks. The gasoline price increases also made the sales decreases for the big three even more extreme than in foreign producers: big three sales dropped from 8.1 to 4.6 million, and their market share dropped from 50 to 44 percent in only two years (Klier and Rubenstein, 2012). The big three went from employing 185,800 to 123,400 people directly at car plants in those same two years. Total employment in parts factories declined from 607,700 to 413,500 (Bureau of Labor Statistics cited in Klier and Rubenstein, 2012). Combined with declining market-share and employment losses for the big three (already down from 237,400 factory jobs in 2000), it is clear that the US auto makers were in dire straits.

The domestic companies in France were facing similar pressures in their home market. In 2012, PSA announced that it would need to cut thousands of jobs in France, including closing a plant outside of Paris. After worker protests in early 2013, the Court of Appeals of the City of Paris blocked the layoffs of up to 14,000 workers until a separation agreement could be reached (Aizicovici, 2013). Although employment in the auto industry has not yet dropped in France since the crisis, the ultimate results are unclear, since the European car market is still contracting, and PSA is still restructuring (*France Autos*, 2013). The French auto industry was already weak before the crisis, having cut 202,000 total jobs from the industry in 2004-2007, largely outsourcing production to eastern and central European countries (Crémieux, 2009). Impressive numbers of job losses, emphasized by the

nearly one million people previously employed in the auto industry when the country has a little more than one-fifth the population of the United States. Sales were down already, but the crisis hastened the decline. Sales declined between 10 to 30 percent year after year during the worst of the crisis (*France Autos*, 2009).

In contrast to the American case, France's auto makers did not see a sharp decline in domestic market share during the crisis. In fact, market share of PSA and Renault in France actually increased slightly during 2008, resting at 47.1 percent. Abroad, however, PSA and Renault continue to face significant losses in world markets: PSA lost €5 billion in 2012, with sales down 12.9% in a European car market down 8%. Renault's sales decrease of 18% in Europe was partially offset by a 9.1% increase in global sales, posting a loss of €25 million in 2012. Further, Renault actually was still posting (modest) profits during 2008 and 2011(*France Autos*, 2009 and *France Autos*, 2013). There is also a stark contrast to the American case in France, because small car sales have traditionally been very high, and French auto makers are better suited to provide the small vehicles requested by French consumers. That being said, PSA's situation looks dire in all but the domestic French market, and Renault is still losing European market share.

Germany also felt the blow from the recession, but its car makers were in a somewhat different situation before the crisis. The German auto market was the third largest in the world, after the US and Japan at the start of the crisis. Industry-wide employment was 780,000 before the crisis, and by September 2009 30,000 jobs had been cut (Dudenhöffer cited in Herbst, 2009). As the industry continues to adjust, it is unclear whether more jobs will be cut, but recently, more jobs may be added.

Unlike the American and French manufacturers, German companies were doing quite

well. Opel (a General Motors subsidiary) was doing quite poorly up to the crisis. BMW had been losing money for a number of years and sold off Rover, and Volkswagen had some investment problems, but otherwise German makes did well up to the recession. Up to the crisis, German brands had acquired many foreign makes, including Rover, Mini, Triumph, Bentley and Rolls-Royce, Bugatti and Lamborghini, Chrysler, Skoda, and SEAT. 2007 was a year of very strong growth, with new car registrations up 17%, but registrations of major German brands increased by 22% (*Germany Autos*, 2009). Even during the crisis, sales continued to increase for German brands domestically, but they did slow significantly. Importantly, all German brands but Opel did not lose any domestic market share during the crisis, whereas Toyota did. The total number of car registrations did decrease, by 1.8 percent, this was only because Opel and Toyota lost so many sales – 9.5% and 27%, respectively. In this manner, domestic brands maintained more than 60 percent of the German market. German car makers were in a worse short-term position globally because they are exporters, and whereas they might have seen increased sales domestically, their sales abroad were not the same. German brands abroad lean toward expensive luxury cars, which are naturally harder hit during a crisis than more economical alternatives, such was the case in increasing demand for smaller cars in France and the United States. After the initial shock of crisis, sales of German cars increased in 2011 and 2012, despite a shrinking market overall, and sales are likely to increase gradually in the future (*Germany Autos*, 2012). Compared with French manufacturers, key German makers bounced back in 2012: BMW is expecting €7.8 billion in 2013 profits to match 2012 (Bryant, 2013). Mercedes-Benz recorded €8.1 billion in profits before taxes in 2012 (Hetzner, 2013). VW Group (which includes other successful brands Audi and Porsche) recorded record total profits of €11.5 billion, up to €14 billion when

Chinese joint ventures are included (Volkswagen Group, 2013). The profits of German companies felt the initial pinch of recession, but the situation is looking up for most major manufacturers.

It is important to note that the idea of domestic car companies is more important to this analysis than merely car manufacturing. Although the manufacture of the vehicles themselves is the key issue around which governments rally, there is more to protecting jobs than protecting individual factories. Individual factories can employ armies of workers, but without the companies surviving domestically, profits from those factories would not flow into a helpful government's tax coffers, nor would there be popular opinion benefits.

CHAPTER 3

POLICY RESPONSES

The United States:

The initial policy response of the US Government to the expanding auto industry crisis was in late 2007. With average price of gasoline increasing by $0.80 in that year, the trail to $4.00 per gallon was under way, and the government responded with policies to increase fuel efficiency (US Energy Information Administration, 2013). This was finalized as a policy response with the *Energy Independence and Security Act of 2007*, as the *Advanced Technology Vehicles Manufacturing Loan Program*. The program was finalized in November 2008 when the Department of Energy (DOE) finalized its rules for the program. This program was allowed to provide up to $25 billion in guaranteed loans to auto makers, but the loans were conditional: Auto makers had to spend the money on updating or retooling factories to make more fuel-efficient vehicles, engineering more fuel-efficient vehicles and technologies, and the final rule stipulated that any vehicles made under this program be 25% more fuel efficient than their 2005 ancestors (US Department of Energy Loans Programs Office, 2008). In addition to the $25 billion in guaranteed loans, the bill also allowed for $7.5 billion in costs to cover the subsidized loans' interest payments (US Government Accountability Office, 2011). In addition to the subsidized loans, the DOE created grants for developing alternative vehicle technology projects up to $29.3 million, of which $14.55 million would come from DOE funds. These grants, unrelated to the ATVM Loan Program,

were announced in December 2008, and the full grant amount would be paid over three years (US Department of Energy, 2008).

The original auto bailout plan, which the auto makers testified to receive on November 19th, 2008, was for $25 billion in guaranteed loans, at that time the bankruptcy of large auto makers was still uncertain (Vlasic & Herszenhorn, 2008b). The bailout itself was to be paid for by money from the $700 billion bailout created to save financial institutions (Vlasic & Herszenhorn, 2008a). But even this $25 billion is a lesser amount than the $50 billion that the bailout bill would have ultimately allowed. There was argument for use of different bailout funds previously allocated, as well. Ultimately, however, the reactions to the initial request for broad loans were rejected. After this first bailout failed, a later $15 billion emergency loan program was considered. This $15-billion program introduced the infamous "car czar" (Herszenhorn, 2008). This emergency loan program failed, as well.

The first loans to carry the label of "bailout" were approved in December, 2008. The money would be in the form of government-backed loans to GM and Chrysler totalling $17.4 billion. The funds were to come from the bailout fund previously approved for the financial sector. However, these loans required the auto makers to sufficiently restructure by March 31 and set limits on executive pay, or the loans would be called back early. These loans would, however, carry an interest rate of five percent, rising to ten in case of default (Pelofsky & Crawley, 2008). President Obama changed the "car czar" into a cabinet-level group to oversee that the loan funds were being used in concert with improved business practices at the loan recipients – the "Presidential Task Force on the Auto Industry" (The White House, 2009). After this initial bailout, the auto makers requested an additional $21.6 billion when they submitted their revised business strategies. They received only modest amounts of

additional loans, however (Kwoka, 2009).

General Motors and Chrysler filed for bankruptcy in the middle of 2009, despite the previous bailout loans. The US Government, having backed loans to GM, received a majority stake in the company. Of the current 500 million shares that the US Government owns, it announced in December 2012 that it plans to sell off the remainder before March 2014. The profit from the initial sale of 200 million shares at around $27.50 per share, would recover $5.5 billion in debt ("General Motors," 2013). Until the remaining 300 million shares are sold, the total amount of investment losses remains unclear.

The *Car Allowance Rebate System* (CARS) was an indirect subsidy to the car makers. Commonly known as "cash for clunkers," the program was initially allotted $1 billion in cash subsidy, but was subsequently increased to $3 billion (Tyrrell & Dernbach, 2011). The program worked to encourage people to purchase a new cars. The program gave $3,500 to $4,500 toward the purchase of a new car. Of course, certain conditions had to be met: "For CARS, the trade-in vehicles had to be less than 25 years old, in drivable condition, registered and insured for the prior 12 months, and have a fuel-efficiency rating of 18 mpg or less." Further, new cars had to be less than $45,000 and get better than 22 mpg. Ultimately, some 690,000 direct sales and up to 250,000 "halo" sales were attributed to CARS – by people buying new cars after they learned that their current vehicles were ineligible (Tyrrell & Dernbach, 2011).

When GM filed for Chapter 11 Bankruptcy, the US Treasury acquired some 61% of the company. But GM still owed an additional $6.7 billion to the Treasury directly ("GM Announces," 2009). When GM was acquired by the government, it took $45 billion in tax carryforwards with it. When the US Treasury started to sell its stock in GM and reduce its

stake to 26%, then the company would lose, by law, its tax carryforwards. But, the Treasury decided that the law did not apply to GM and a government-owned company (Blumenthal, 2012).

In the end, when considering the total cost of loan interest payments, and potential losses from sales of stock, the bailout to the car makers will cost somewhere around $25 billion (Plumer, 2012). Estimated tax-payer costs for aiding the entire auto industry may be much higher, but they consider secondary businesses related to manufacturing and sales, not the just car makers themselves.

Germany and France:

The German equivalent of "cash for clunkers" was more liberal than the American version. The program – "Umweltprämie," or colloquially "Abwrackprämie" – requires that a car be nine years old, that the person trading in the vehicle be the owner for at least the past year, that the trader buys a new car within the allotted timeframe (up to June, 2010), that the budget of €5 billion has not yet been exhausted, and that the car meet at least the Euro 4 emissions tier (Bundesamt für Wirtschaft und Ausfuhrkontrolle, 2009). The Euro 4 emissions requirement is the currently enforceable vehicle emissions requirement in the EU. This German program had no specific trade-in vehicle mileage requirements, nor did it have a tiered system of incentive payments. For any new car, the payment was €2,500 (Ewing, 2009). The program initially started with a total budget of €1.5 billion, but soon had to be raised to €5 billion due to the unexpected success of the program (Kirschbaum, 2009). In the end, the program may have actually cost the German government €6.6 billion (Ewing, 2009).

Although still small, the Germany government has already started to subsidize

research into electric vehicles. Specifically, they have given €500 million to support research of battery technology and electric-car infrastructure projects (Fuhrmans, 2011). In addition to this support for battery and infrastructure research, the state has also provided support to individual companies. BMW received €46 million to subsidize costs of making electric cars at a factory in Leipzig, Saxony. Volkswagen received €83.7 million in aid to support the retooling of its factory in Zwickau, Saxony (White, 2011). Although, the Volkswagen factory will not be producing electric vehicles.

It is worth mentioning that the German government initially considered a much more aggressive strategy for bailing out the auto industry, including a Europe-wide plan ("Bailout Beat," 2008). After repeated attempts at receiving direct subsidized loans from the German government, Opel was unable to receive funding (Bovensiepen, Hawrenek, & Reiermann, 2008). Even though the aid was ultimately denied, it is still an important consideration of the German state's views on providing state aids to car makers. Opel requested loans to help cover its restructuring costs of some €3.3 billion. First, the German government considered providing loans to Opel in order to save the jobs of 25,000 Opel employees in Germany. Then, after the US Government's bailout of Opel's parent GM, the German government waited to see GM's restructuring plans including the selling off of Opel. The German government saw a potential buyer for Opel and backed the deal, but after GM's return to profitability in just one year, the company decided to keep its German subsidiary. GM's decision, and willingness to provide support for Opel's reorganization, led to the request from Opel to be only €1.1 billion in government loans. GM has committed to provide €1.9 billion in restructuring costs. As of right now, it is unclear if Opel will again go to Berlin to ask for help, since it has not yet received an adequate bailout (Sheahan, 2010).

French and German heads of state initially both called for aid to the auto industry, but in the end, France may be the one that actually contributed more toward the cause ("France," 2008).

France also had its version of "Cash for Clunkers." It was called *Aide à l'Acquisition des Véhicules Propres* "Aid to Acquire a Clean Vehicle" or unofficially: *Prime à la Caisse* "Junkyard Payout." This program had more in common with the American program than it did the German program, in that it had a tiered payment system, albeit based on carbon emissions, rather than fuel mileage. Although, fuel efficiency is related to the amount of carbon dioxide emitted by a car. The French scheme paid €1,000 for a car that was at least ten years old for purchases made in 2009. The owner of the vehicle had to be the one receiving the aid, the car had to be registered to the current owner for at least six months prior, the car was registered, the vehicle needed to have a clean title, and the car had to be destroyed upon delivery of the new car (Décret n° 2007-1873 Art. 4). In order to receive the main benefit of €1,000, a car had to be traded in on one that emitted fewer than 160 grams of CO_2 per kilometer. The French state paid a "superbonus" for purchasing a particularly clean vehicle. Purchasers of new vehicle that emitted less than 130 g CO_2/km received additional benefit, up to €5,000 bonus:

Amount of Carbon Dioxide Emissions (in grams per kilometer)	Amount of Aid (in euros)				
	Year of Billing				
	2008	2009	2010	2011	2012
amount ≤ 60	5 000	5 000	5 000	5 000	5 000
60 < amount ≤ 90	1 000	1 000	1 000	1 000	1 000
90 < amount ≤ 95				500	500
95 < amount ≤ 100			500		
100 < amount ≤ 105	700	700			
105 < amount ≤ 110					
110 < amount ≤ 115				100	100
115 < amount ≤ 120			100		
120 < amount ≤ 125	200	200		0	0
125 < amount ≤ 130			0		

Note. From Décret n° 2007-1873 du 26 décembre 2007 instituant une aide à l'acquisition des véhicules propres, Art. 3, modifié par Décret nº 2010-447 du 3 mai 2010 – art. 1

When taken with the initial €1,000 payment, a consumer could potentially receive €6,000 in car purchasing aid from the state. Many vehicles met the requirements for receiving some bonus (particularly the €700 bonus), but the €5,000 bonus was de facto reserved for electric vehicles. In addition to the original program adopted in late 2008, the benefits have been extended. The initial benefit of €1,000 was extended up to March 31, 2010. After that, the initial benefit dropped to €700 until September 30, 2010, and finally €500 (Décret n° 2009-1581 Art. 2). As can be seen from the chart above, the superbonus amounts have been

modified, but are still present. Although the program was initially only allotted €220 million, it has ended up costing the state €514 million in 2009 and €510 million in 2010, totaling more than one billion euros spent (Alves, 2010).

The French government announced on Tuesday, January 20th, 2009 that it would provide aid to the French auto industry. This announcement followed debates about how to help the industry and pressures from protests, especially about potential job cuts at car factories in France (Pearson, 2009). As part of the plan, the French President Nicolas Sarkozy promised that the funds would not allow any car factories in France to be shut down – though the final plan had no such written guaranty. The EU Competition Commissioner ensured that there would be no strings attached to the loans that would limit French car makers' freedom in the single market. The final result was that France's two remaining car manufacturers, Peugeot-Citroën and Renault, divided €6 billion in state-backed subsidized loans ("Back," 2009).

The International Labor Organization's report on subsidies in the automotive sector (2010) describes the way in which the French government facilitated the process of winding-down car factories:

> Schemes to put employees on part-time unemployment benefit have been made easier and State financing has been significantly improved. One constituent of the schedule is the State's contribution of €2.13 per hour to the unemployment benefit for firms of over 250 employees and €2.44 for firms with fewer than 250 employees. In return, the proportion of their previous salary that an affected employee receives is increased from 50 per cent to 60 per cent. In April 2009, an agreement was reached between the social partners who manage the fund that finances unemployment benefits (UNEDIC) to increase this proportion further to 76 per cent. Certain firms, such as Renault, have actually increased it to 100 per cent as part of its "crisis solidarity pact", using in part time taken from the reduction in working time introduced as part of the 35-hour week. (p. 25-26)

Late July last year, the French Government announced that it was further extending and expanding its car scrappage program. The “superbonus” now given for buying an electric car will be a total of €7,000. The incentive for a hybrid vehicle will also be increased to €4,000. This increase will require an additional €350 million in purchasing benefits. This extension of the Prime à la Casse was also announced with direct Government subsidies. The state will be providing PSA and Renault with €450 million to modernize factories in France (“French Auto,” 2012).

The ILO stated (2010), “The manufacturers’ financial arms have also benefited from subsidies from the State, to allow them to continue to finance their distribution networks and clients, despite the liquidity crisis” (p. 25). The amount of aid given to Banque PSA, Peugeot-Citroën's financial arm, is a guaranteed backing of any loans that the bank would need, up to €7 billion in new bond issues (Parussini, 2013).

The French Strategic Investment Fund (Le Fonds Stratégique d'Investissement) was created by the French government to provide assistance to firms that might fail in late November 2008 (Sovereign Wealth Fund Institute, 2010). The fund later was used to invest €125 million in a Renault-Nissan battery factory in France, which received an additional €30 million investment from the French Atomic Energy and Alternative Energies Commission (Frost, 2009).

CHAPTER 4

REGULATORY ENVIRONMENT

The US, France and Germany must comply with sets of trade rules enacted by their respective supranational organizations. These rules preclude government intervention in the private sector. The organizations are the World Trade Organization and the European Union define what qualifies as acceptable state aid:

World Trade Organization:	European Union:
• Agreement on Subsidies and Countervailing Measures (SCM Agreement) • A subsidy must be not only a financial contribution from a government, but it must confer a benefit. A benefit could be a government giving loans to a company better than would otherwise be available to it on the market. • Rules Apply to all levels of government, as well as state-owned companies. • Subsidies only exist when they go to a specific enterprise, industry, region, or prohibited action (tariffs). • There are two categories of subsidies:	• Competitiveness Policy Framework • The Treaty on the Functioning of the European Union (TFEU) lays out the rules for state aid in the EU. • Aid is blocked that is “resources” given by a government that distorts or “threatens to distort” competition (Art. 107). • Many types of aid are not blocked (so long as they do not distort competition): to individual consumers, to Eastern Germany, for economic development in poor regions, to promote important common EU interest, to develop certain economic activities, and to promote culture and heritage.

Prohibited subsidies are contingent on export performance or on local content. Actionable subsidies are subject to challenge due to adverse effects of injury to an industry from subsidized imports, serious prejudice (related to adverse effects of subsidized imports), or from nullification or impairment of a tariff reduction.

- A challenge must be brought to the WTO by an injured government.

Note. From World Trade Organization, 2013

- The Commission has authority to demand a country to stop aid it finds in violation, further pursued by the ECJ (Art. 108).
- The Council may unanimously approve requests for state-aid-program authorization.

Note. From European Commission, 2013b

The nature of the two organizations' rules on state aid vary somewhat, but they do have the same state goal: to prevent countries' governments from supporting otherwise uncompetitive industries, thereby giving their domestic industries unfair advantage on the global (or European) marketplace. The WTO has more general guidelines that sweepingly apply to many types of aid and levels of government. The EU rules have many levels of specific regulation, the ones mentioned above include only state aid available to the auto industry, but there are several other sections that specifically apply to certain industries, e.g. film or agriculture.

The United States:

The USA is part of the WTO, an organization that limits the amount of state intervention in the private sector that disturbs the free market. A direct example of this intervention would be direct subsidies to the auto makers. The US did provide loans to the

auto makers. These loans were prohibited by WTO rules: they were government funds given to car companies, the loans did benefit the car companies (GM paid only 5% interest on its loans, although the market rate would have been 143%), and they definitely give a trade advantage to US auto makers. Loans made to US auto makers seem to violate the WTO rules to which the US has agreed, so why were the loans allowed? Brunel and Hufbauer (2009) propose that it would be hard for another country to bring a case against the US It would look bad in the court of popular politics to go after the US for subsidizing its auto industry, since any concerned country also subsidizes their own, and the US could initiate a retaliatory case against them. The loans to the US auto makers require that they develop more environmentally friendly models. The loans require environmental benefits directly because they require the Detroit auto makers to comply with the then newly adopted fuel efficiency standards, as well as President Bush giving an exemption to California allowing it to enact stricter tail-pipe emissions standards – this combination made the loans eligible for the WTO's exemptions for environmental reasons.

The additional funds given to auto makers for research into alternative fuel vehicles would likely fall under this same category. Whereas research and development of more environmentally friendly technologies is granted an exemption, producing those vehicles is not. The $29.3 million in alternative-fueled vehicle research grants from the DOE would be allowed under the first condition, but the DOE's other program would not. When the DOE gave $25 million in guaranteed loans, as well as $7.5 billion in loan-interest payment funds, it violated this rule. Granting loans so that car makers can retool their factories to make more environmentally-friendly models may have been exempt from WTO rules, but the exemption expired in 1999. The US was not called out by other governments likely for the same reason

as the main bailout package to Detroit was not called out – other countries were doing the same thing, and even an expired environmental exemption would provide grounds for some kind of defense.

Seeing how the main part of a violation of WTO rules would make a subsidy to the auto industry objectionable, a government might likely want to find a way to give aid to the auto industry and have it not be objectionable. In the case of guaranteed loans and grants to auto makers, the US Government used the exemptions for concerns about the environment to slip it's main bailout through a WTO loophole. Another way to create auto subsidies without it being objectionable is to subsidize without disturbing the market. This means that the US government, through a program such as Cash for Clunkers, would be able to subsidize the purchase of *any* new car. Because the program did not require car buyers to only look at domestic makes, the program is consistent with WTO rules (Brunel & Hufbauer, 2009).

Considering how the Cash for Clunkers program was designed, it was not the best solution for helping GM and Chrysler. But, it did help to keep foreign auto makers North American divisions happy. The crisis also effected sales of Toyota and Hyundai in the North American market. Reasonably, Toyota Motor North America could have gone to the Senate asking for assistance like the Big Three did, but they held back. Like Ford found, the negative publicity of receiving government money outweighed the benefits. If you look closely at the window switches, screw covers, airbags, or ABS controllers in modern vehicles across manufacturers, it is clear that foreign and domestic brands share some components. A foreign car maker's North American division would be hesitant to oppose a bailout for Detroit because it would also hurt the parts suppliers that they have in common. Nissan and BMW were able to be free riders on the preservation of auto parts suppliers commensurate

with congressional support of the Detroit manufacturers. Companies like Toyota were less likely to object to the Big Three's bailout because they benefitted disproportionately from cash for clunkers – eight of the top ten vehicles purchased with Cash-for-Clunkers trade-ins were from East Asian manufacturers (National Highway Traffic Safety Administration, 2009).

In another program, highly publicized, though not considered in the exact same way, GM filed for Chapter 11 bankruptcy. Although the US government became a holder of 61% of the shares of "New GM," that did not change the WTO rules as much, since this was a reasonable consequence of the unchallenged bailout loans in the first place. But, the tax carryovers are of interest. By passively allowing New GM to have $45 billion in tax credits, the US government has granted the company an additional amount of aid that dwarfs the loans previously given.

In the end, it seems that the aid given to auto makers (GM and Chrysler specifically) was challenged by the Chinese government (Office of the US Trade Representative, 2012a). Of course, this WTO challenge is understandable for two reasons: First, the US initially created countervailing duties on Chinese tires, causing China to respond with its own countervailing duties and imported American cars and trucks. Second, the Chinese do not have car manufacturers that export to the US market, negating the impact of "pot-calling-the-kettle-black" backlash during a WTO challenge. The final result of this challenge remains unclear (Office of the US Trade Representative, 2012b).

Germany and France:

Germany and France are both members of the WTO, but they have the additional

constraint of being member states in the European Union, which has the stated goal of fostering economic cooperation and creation of a common European market. As such, the European Union imposes additional constraints on the individual member state's abilities to provide assistance to ailing industries.

Like the USA, European governments, particularly in centers of car manufacturing like Germany and France, national champions received state aid. How did these bailout measures pass the scrutiny of the European Commission? The German and French each had their own equivalents of cash for clunkers: the Umweltprämie and Prime à la Casse, respectively. These programs would not be challenged by the EU because they, again like the American program, did not represent a distortion of the market. This is especially important for the case in Germany, as the Umweltprämie was by far the most significant source of state aid (ILO, 2010). France's program, on the other hand, can be seen as more interventionist than that of Germany's. The French benefit was much higher, and it included a tiered system of increasing benefit for those who chose more environmentally friendly cars. The environmental angle is particularly helpful for French manufacturers for two reasons. One, French car makers sell many more small cars than they do large ones, so they were already geared toward increasing sales of small cars. Two, French manufacturer Renault has already invested over €4 billion in electric car technology (Frost, 2009). Renault has bet its future on the success of electric cars, and the French state is helping make that a reality with up to €7,000 in government incentives for people to buy electric cars. The advantage to supporting electric cars go past merely helping Renault, because the factory where Renault's most popular electric vehicle will be made is in France.

The largest bailout package was France's €6 billion in state-backed loans to PSA and

Renault. French president Nicolas Sarkozy promised that the bailout loans would only go to companies in order to keep factories humming in France. These loans, especially considering the French president's promises would certainly be in violation of the European Economic Community's rules for the single market. However, the EU competition commissioner already guaranteed that Sarkozy could not make that promise. Here, we see that the terms of loans were limited by the rules of the EU. If the EU did not stop this promise from being made, the WTO rules that influenced the American loans may have come into play. EU competition rules might ordinarily block any kind of government loan to a private company, but the rules were relaxed to allow additional exemptions for state aid. Aside from a specific exemption to cover car scrappage programs "...measures aiming to encourage demand...", exemptions exist for restructuring aid, as well as state-guaranteed loans and subsidized-interest loans, so long as they apply to all manufacturers equally. Seeing as how all manufacturers based in France received state loans, it seems that they used the exemption, being given approval for the program by the European Commission ("New Pain," 2012).

The Germans did join the French in providing state aid to factories. The €46 million that the Germans gave to BMW for an electric car factory, goes with the €155 million that the French gave to Renault-Nissan. These two facilities work to make electric car components, and electric cars fall under the exemption of "environmental aid." In this way, by supporting national champions' ecologically friendly goals, the respective governments will comply with EU rules. Related to this environmental exemption is the €500 million that the German government gave to various companies for electric car research. This research funding would be exempt under the framework for state aid for research and development and innovation published in August, 2008 (European Commission, 2009).

Germany also provided aid for the retooling of factories. This is a slightly different version of the environmental exemption. Under the *guidelines on state aid for environmental protection of 2008*, an EU state can support a car company retool any of their factories. This includes funding to "...improve the environmental performance in their production process" (European Commission, 2009). This is a particularly telling avenue of allowing state aid in the automotive sector. For any factory, it could be reasonably assumed that the company would benefit from a retooling. Cars receive facelifts, if not complete redesigns, every few years, and that involves millions (or billions) of euros of retooling costs for every manufacturer. All that a car company would need to do to receive legitimate state aid for retooling costs would be to also improve the energy efficiency of said facility, which would be a benefit in energy savings, too. Of course, the factories in question were located in the German state of Saxony, a former state of poor East Germany. The exemption for regional aid would also allow for "...investment aid for...introducing fundamental change in the overall production process" (European Commission, 2009). In this way, the factories in Saxony could be "double covered" by EU competition policy exemptions.

The EU also granted exemptions for governments to subsidize layoffs of workers. Because of overcapacity rampant in the European car market, this makes particular sense. France's increase in unemployment benefits being given to those who were partially laid off, fell under active social protection. The French government would even be eligible for additional EU funding from the European Adjustment Globalization Fund (European Commission, 2009).

The largest amount of aid given by France was just recently announced. France's support of Peugeot's Banque PSA Financial seems on the surface to be a blatant violation of

EU regulations. The challenges for France's support of Banque PSA Financial have heard claims of distortion of the internal market from German car makers (Parussini, 2013). But, there is an exemption granted to it by the rules enacted in 2008. The European Commission has approved €1.2 billion of the state guarantees for the first three years, adding "The Commission's approval is conditional on the submission during this period of a restructuring plan for the entire PSA group" (European Commission, 2013a). Even with the largest amount of bailout money yet, it appears that the commission will allow for a state to save its national industries. Rescue and restructuring aid is just revised form the 2004 guidelines. The guidelines require that a company be able to support itself after the state loan guarantees expire, and that it will remain competitive without state support after restructuring. It still remains to be seen if this can happen, since PSA itself, and not Banque PSA Financial is undergoing the same process from an earlier starting date.

CHAPTER 5

SIMILARITIES

The governments in the countries considered varied somewhat in their approaches to saving their domestic car industries, but their goals were the same. Generally, governments want to protect or create jobs. Protecting jobs is a much easier task than the endeavor of creating jobs in the private sector. Protecting jobs in the auto sector is incredibly important, if for no other reason, than because huge numbers of people are employed in the manufacture and design of automobiles. The number of people whose livelihoods are tied to the car industry swell when considering jobs that are reliant upon, if not directly subsidiary, to domestic car makers: mechanics at domestic repair shops, dealers, and parts manufacturers. As any government would want to protect jobs, the car industry is an incredibly transparent example of state intervention helping the "common man." The push to protect jobs is clearly illustrated by rhetoric present in news coverage of the bailouts in all countries considered. Especially in France, where bailout funds were promised to be used only to keep factories within the country open.

The public image of a government helping the economy is further strengthened by the image of solidarity created by aiding an ailing car maker. The economies in all of these countries were slowing, and helping the car industries is a very public way to demonstrate programs to inject money into the economy during a recession. These companies are national champions, who have had their nameplates on cars for over a century. Like protecting jobs by

tying state aid to domestic factories, state aid would also logically be limited to domestic companies. In the US, it was only Detroit who went to congress, but Toyota could have also. It would have been interesting to see how the debate over bailouts would have changed if that had been the case. The demand to protect only domestic producers was also represented in public backlash against GM funding Opel's (a foreign subsidiary) restructuring with US bailout money (Sheahan, 2010). Foreign makers present in the countries would also have reasons to not rock the boat of bailouts for domestic producers. Toyota Motor North America might have wanted to claim that GM and Chrysler were being given an unfair advantage, but they had other reasons for not questioning the government's biased support. Foreign manufacturers present would not want a domestic maker to fail for fear of losing its parts suppliers, many of whom might not be able to stay in business if they had to so drastically reduce production in the wake of their largest clients closing up shop. Foreign car makers, in the US especially, benefitted from the car scrappage programs because they were also able to sell many more vehicles during the recession than they would have otherwise.

Governments in all countries considered faced similar challenges during the auto industry crisis in 2008 and 2009. Domestic industry giants in all three countries were facing overcapacity and losses (Hawranek, 2008). Germany only ended up facing different challenges because its producers were able to recover quite quickly, before an agreement about a bailout could be finalized (Walker, 2010). The one Germany company that truly was, and still is, in danger of failing without government assistance is Opel.

Opel is a special case for a large domestic firm. Opel is the only large German car maker that is owned by a foreign company, GM. Opel's ownership by GM further complicates matters with GM's return to profitability. Although the German government

considered giving billions of euros in state loans to the company, it ultimately decided to not give the funds because of externalities not related to regulatory constraints. Opel's ownership by GM made it a less promising candidate for state aid for multiple reasons: it could not be viewed as a kind of "national champion" of the industry anymore because it was not "truly" German, it was owned by a foreign company that was seen publicly as being so poorly managed, and finally GM wound up being a potential financier. The German government's contempt of GM ownership was also reflected in their enthusiasm for selling Opel to a Canadian parts manufacturer, which GM soured the waters with by ultimately rejecting. In the eyes of the German government, it seems that their attitude is that if GM really wanted to keep Opel, than it should have the money to do just what it said. Finally, Opel is by far the smallest German car maker (small luxury and performance brands like Porsche are subsidiaries of larger manufacturers), so the potential loss of it is less catastrophic to the now robust German car industry.

CHAPTER 6

CONCLUSION

Car makers in countries in both regions were truly in danger during the worst of the recent recession. Governments responded with various programs. It would seem that the programs in different countries would have been different in the two regions because of the differing factors of the recession, as well as their different regulatory environments. However, the similarities between the programs can be seen as a result of the similarities in the regulatory environments under which the two regions must operate.

Large cash loan bailouts were possible in the US and Europe because of exemptions given in WTO and EU trade rules to help rescue companies on the verge of failure to restructure. This restructuring is what is taking place with GM, Chrysler, PSA, Renault, and Opel. Germany ultimately did not provide the same kind of bailout packages that the US and France did because its car companies weathered the recession better than others, with the exception of Opel. Opel was not able to secure government financing largely because it was a subsidiary of GM, which, by refusing to sell the division during its own restructuring, implied that it would be able to restructure the company with internal funding.

The car scrappage programs present in the three countries can be explained as a way to boost the economy and auto manufacturing generally, but it was especially important in countries with large domestic companies. The scrappage programs provided a way for government to provide assistance to companies without giving a preference to any one

company, which would have been in violation of WTO or EU trade rules. Fuel economy or emissions standards limitations on new cars purchased under these programs also allowed for exemptions under environmental concerns in both regions – especially useful for France's electric car industry. Additionally, the scrappage programs were a way to quell the potential protests of foreign manufacturers.

The difference in additional funding is clear when considering funding for other financial operations and tax incentives. GM was extraordinary in being allowed to keep so many tax credits from before its bankruptcy. France's support of PSA Financial may be rescue and restructuring aid, but it is still unclear if it truly qualifies as not favoring only one company. Germany's support of domestic factories only shows that even without big bailouts, it slipped in aid under research and development and environmental retooling exemptions. France's additional support for unemployment benefits of laid-off car factory workers is an expense to be counted under bailouts, because the higher unemployment benefits come from tax-payer money, and they allow a company a competitive advantage because they can more easily lay off workers, saving them money.

State aid rules provided the regulatory environment under which the countries' governments had to work. Although it may seem like governments worked to escape the competition rules, they were in fact altering their programs in order to work within their confines: France was not allowed to tie state aid to protecting domestic auto industry employment. Germany did not end up challenging France's aid to Banque PSA Finance because the Commission only allowed a limited amount of the loan to be disbursed. China and the US did clash over auto aid, but the end of this challenge is still not clear. The competition policies in both are enforceable: in the US the WTO can receive challenges and

allow contravening tariffs, and the EU Commission has the power (with the ECJ) to fine governments for breaking the rules. The other side to state aid rules bending to allow for increased government intervention is the fact that governments actually did keep their aid policies within the confines of allowable state aid. The governments may have wanted to do more to aid their domestic producers, and in the past tariffs were the solution, but the strength of WTO and EU rules moves away from protectionism toward state aid. Even though state-aid programs may be sometimes questionable, governments follow the rules of the WTO and EU, understanding the real consequences for taking state aid too far.

The differing nature of the EU and WTO rules allowed them to keep legitimacy as well. Even before state-aid programs were being considered for the auto industries, the EU revised and issued special rules for the crisis. The Commission recognized that, in order to keep legitimacy, it would need to be very specific about what kinds of aid would be available to governments during the crisis. With the WTO, the nature of enforcement being based more on governments challenging each other's practices kept them from having to issue clarifications on the eve of crisis.

For the most part, there has been a lack of challenges to these policies because of the similar situation in Europe and the US The governments all wanted to protect employment in their countries, and that was done by aiding the manufacturers. The only reason that governments needed to provide this protection was because domestic labor costs were so high (even though foreign makers operate profitable factories in the same regions, the perception remains). Car scrappage schemes were similar because WTO and EU rules were so similar (especially considering EU countries also operate under WTO rules). Only the tax carryforwards that the US Government allowed New GM to keep seem to be a violation of

the spirit, if not the words, of WTO rules. New GM was only allowed to *keep* that $45 billion, but it was not directly given financial assistance. Tax carryforwards may prove to be a real violation of WTO rules. If China's challenge succeeds, then the legitimacy of competition rules will be greatly strengthened. The set of solutions available to governments to help their domestic car industries, without (significantly) distorting the market would naturally be the same in different regions.

The state aid provided to the auto makers in the US and Europe differ only slightly because of differing regulatory environments. As it turns out, the US followed WTO rules and exemptions that allowed seemingly uncompetitive behavior of its government. Likewise, France and Germany provided much assistance to car makers, but the aid was all under (some very recent) exemptions to EU rules, before encountering WTO rules. The competition policies have real consequences for governments that would break them, but the rules themselves have ben made conspicuously flexible. The WTO and EU understand that their goals are to work toward a common market by gradually reducing barriers to trade and unfair competition, not to blindly impose rules without recognizing the political realities in an economic crisis.

References

Aizicovici, F. (2013, January 30). La Cour d'Appel de Paris Suspend le Plan Social de PSA. *LeMonde*. Retrieved from http://www.lemonde.fr

Alves, C. (2010, December 28). Prime à la Casse: 1 Milliard d'Euros de Coût pour l'Etat. *Auto News*. Retrieved from http://www.autonews.fr

Back in the Driving Seat; The State and the Economy: France. (2009, March 14). *The Economist*. Available from http://www.economist.com

The Bailout Beat: German Auto Industry Seeks Government Help. (2008, December 11). *Spiegel Online*. Retrieved from http://www.spiegel.de

Blumenthal, R. G. (Ed.). (2012, December 8). Buffett, Treasury, Perfect Together? Of Taxes, Losses, and GM. *Barron's Online*. Retrieved from http://online.barrons.com

Bovensiepen, N., Hawrenek, D., & Reiermann, C. (2008, November 24). To Bail or Not to Bail: German Government 'Has to Step into the Breach'. *Spiegel Online*. Retrieved from http://www.spiegel.de

Brunel, C., & Hufbauer, G. C. (2009). *Money for the Auto Industry: Considtent with WTO Rules?* (PB09-4). Washington: Peterson Institute for International Economics.

Bryant, C. (2013, March 19). BMW Warns of Stagnating Profits. *Financial Times*. Retrived from http://www.ft.com

Bundesamt für Wirtschaft und Ausfuhrkontrolle. (2009). *Richtlinie zur Förderung des Absatzes von Personenkraftwagen vom 20. Februar 2009 mit Änderungen der Richtlinie vom 17. März 2009 und vom 26. Juni 2009*. Berlin: BAFA.

Business Monitor International. (2009). *Germany Autos Report Q4 2009*. London: BMI.

Business Monitor International. (2013). *Germany Autos Report Q3 2013*. London: BMI.

Chancellor Merkel Locked in Emergency State Aid Talks with Opel. (2006, November 17). *Deutsche Welle*. Retrieved from http://www.dw.de

Crémieux, L. (2009). French Workers Face the Crisis. *New Politics,* 12(3), 34-37.

Décret nº 2007-1873 du 26 Décembre 2007 Instituant une Aide à l'Acquisition des Véhicules Propres. Retrieved from http://www.legifrance.gouv.fr

Décret n° 2009-66 du 19 Janvier 2009 Modifiant le Décret n° 2007-1873 du 26 Décembre 2007 Instituant une Aide à l'Acquisition des Véhicules Propres. Retrieved from http://www.legifrance.gouv.fr

Décret n° 2009-1581 du 18 décembre 2009 modifiant le décret n° 2007-1873 du 26 décembre 2007 instituant une aide à l'acquisition des véhicules propres et le décret n° 2009-66 du 19 janvier 2009. Retrieved from http://www.legifrance.gouv.fr

European Commission. (2009). Annex 2. In *Responding to the Crisis in the European Automotive Industry*, (104). Brussels: COM.

European Commission (2013a, January 29). Treaty Provisions on State Aid. Retrieved from http://europa.eu

European Commission. (2013b, February 11). *State Aid: Commission Temporarily Approves Rescue Aid for Banque PSA Finance* (Reference: IP/13/106). Retrieved from http://europa.eu

Ewing, J. (2009, May 7). Cash for Clunkers: Car-Scrapping Plans – Germany's Lessons. *Spiegel Online*. Retrieved from http://www.spiegel.de

Business Monitor International. (2009). *France Autos Report Q4 2009*. London: BMI.

Business Monitor International. (2013). *France Autos Report Q2 2013.* London: BMI.

France and Germany Pledge Auto Aid. (2008, November 24). *The New York Times*. Retreived from http://www.nytimes.com

French Auto Industry Gets Government Boost. (2012, July 25). *Deutsche Welle*. Retrieved from http://www.dw.de

Frost, L. (2009, November 5). Renault, Nissan to Form Car Battery Venture with French State. *Bloomberg*. Retrieved from http://www.bloomberg.com

Fuhrmans, V. (2011, February 28). Germany Frets About Its Car Industry. *The Wall Street Journal*. Retrieved from http://www.wsj.com

General Motors. (2013, January 10). *The New York Times*. Retreived from http://www.nytimes.com

GM Announces Agreement with U.S. Treasury and Canadian Governments Providing Fast Track to Competitive Future for 'New GM'. (2009, June 1). *General Motors News*. Available from http://www.archive.org

Hawranek, D. (2008, November 25). Worst Crisis Since World War II: German Auto Industry Facing the Abyss. *Spiegel Online*. Retrieved from http://www.spiegel.de

Henry, J. (2012, December 31). U.S. Auto Sales, Profits Are Up for 2012. *Forbes*. Retrieved from http://www.forbes.com

Herbst, M. (2009, September 28). How Long Can Germany Keep Auto Jobs? *Bloomberg Businessweek*. Retrieved from http://www.businessweek.com

Herszenhorn, D. M. (2008, December 8). Deal to Rescue American Automakers Is Moving Ahead. *The New York Times*. Retrieved from http://www.nytimes.com

Hetzner, C. (2013, February 7). Struggling in China, Daimler Sees Flat 2013 Profit. *Reuters*. Retrieved from http://www.reuters.com

International Labor Organization. (2010). *The Global Economic Crisis Sectoral Coverage: Automotive Industry: Trends and Reflections* (wp278-NR.doc). Geneva: ILO.

Kirschbaum, E. (2009, September 2). German 'Cash for Clunkers' Out of Gas Just Before Vote. *Reuters*. Retrieved from http://www.reuters.com

Klier, T. H. & Rubenstein, J. (2012). Detroit back from the Brink? Auto Industry Crisis and Restructuring, 2008-11. *Economic Perspectives* 36(2), 35.

Kwoka, J. E., Jr. (2009). The U.S. Auto Industry Under Duress: Fit, or Finished? *Competition* Policy *International* 5(49).

McVeigh, P. (2013, February 19). Ford, PSA, and Toyota Hit Hard as Europe Sales Slump to 23-year Low. *Automotive News Europe*. Retrieved from http://europe.autonews.com

National Highway Traffic Safety Administration. (2009, August 26). *C.A.R.S. Program Statistics*. Washington: NHTSA.

New Pain Ahead for EU Automakers. (2012, November 24). *The European Automotive Market*. Retrieved from http://globalautomotiveindustrynews.com

Office of the United States Trade Representative. (2012a, July 5). *Obama Administration Challenges China's Unfair Imposition of Duties on American-Made Automobiles*. Washington: Executive Office of the President of the United States.

Office of the United States Trade Representative. (2012b, October 23). *World Trade Organization Establishes Panel to Address U.S. Challenge to China's Duties on Autos*. Washington: Executive Office of the President of the United States.

Parussini, G. (2013, January 9). French Government Still Believes Guarantee to Peugeot Financing Arm not State Aid. *The Wall Street Journal*. Retrieved from http://www.wsj.com

Pearson, D. (2009, January 21). France Prepares Funds to Aid Auto Industry. *The Wall Street Journal*. Retrieved from http://www.wsj.com

Pelofsky, J., & Crawley, J.. (2008, December 19). Bush Throws Lifeline to Auto Industry. *Reuters*. Retrieved from http;//www.reuters.com

Plumer, B. (2012, August 15). Auto Bailout Price Tag Rises to $25 Billion. How High Will It Go? *The Washington Post: Wonkblog*. Retrieved from http://www.washingtonpost.com/blogs/wonkblog

Sheahan, M. (2010, June 16). GM to Restructure Opel Without European Aid. *International Business Times*. Retrieved from http://www.ibtimes.com

Sovereign Wealth Fund Institute. (2010, February 2). Summary: Le Fonds Stratégique d'Investissement (FSI). *SWF*. Retrieved from http://www.swfinstitute.org

Tyrrell, M. & Dernbach, J. C. (2011). The "Cash for Clunkers" Program: A Sustainability Evaluation. *Unversity of Toledo Law Review* 42, 467.

U.S. Department of Energy. (2008, December 3). Research, Development, and Demonstration of Alternative Vehicle Technologies. Retrieved from http://www.e*nergy.gov*

U.S. Department of Energy Loans Programs Office. (2008, November 6). Fact Sheet: Advanced Technology Vehicles Manufacturing Loan Program. Retrieved from http://lpo.energy.gov

U.S. Energy Information Administration. (2013, February 19). Petroleum & Other Liquids: Full History. Available from http://www.fueleconomy.gov

U.S. Government Accountability Office. (2011). *Advanced Technology Vehicle Loan Program Implementation Is Under Way, but Enhanced Technical Oversight and Performance Measures Are Needed* (GAO-11-145). Washington: GAO.

Vlasic, B., & Herszenhorn, D.M. (2008a, November 18). Detroit Chiefs Plead for Aid. *The New York Times*. Retrieved from http://www.nytimes.com

Vlasic, B., & Herszenhorn, D. M. (2008b, November 19). Auto Chiefs Fail to Get Bailout Aid. *The New York Times*. Retrieved from http://www.nytimes.com

Volkswagen Group of America. (2013, March 14). Volkswagen Group Achieves Key Milestones in 2012. Retrieved from http://www.volkswagenag.com

Walker, T. (2010, November 2). Asian Demand Drives German Auto Industry Growth. *Deutsche Welle*. Retrieved from http://www.dw.de

White, A. (2011, July 13). BMW, Volkswagen State Aid for Saxony Car Plants Probed by EU. *Bloomberg Businessweek*. Retrieved from http://www.businessweek.com

The White House Office of the Press Secretary. (2009, February 20). Geitner, Sumner Convene Official Designees to Presidential Task Force on the Auto Industry. Retrieved from http://www.whitehouse.gov

World Trade Organization. (2013). Agreement on Subsidies and Countervailing Measures ("SCM Agreement"). Available from http://www.wto.org

Zino, K. (2009, September 9). Opel Soap Opera Continues: As GM Board Meets, German Government Threatens to Call Opel Loan. *The Detroit Bureau*. Retrieved from http://www.thedetroitbureau.com